

**From:** "Smith, Lee" <lee.smith@Daikinac.com>  
**To:** mstanga@verizon.net; DWare@energy.ca.gov  
**Date:** 1/30/2012 2:58:57 PM  
**Subject:** RE: Altherma Compliance Option

David,

Thank you for the feedback and information. It is unfortunate and extremely disappointing that we will not make the Feb 8th meeting. After 2+ years since our original application to the CEC in December 2009, it was hoped that we were long past the review of "what Altherma is" and its waiver, but we do understand that if you have any reservations, you cannot let it pass.

Since the beginning, this process has been somewhat swings and roundabouts, plus being very long and drawn out.

Daikin originally filed an ECM request for the CEC to accept the COP and EER ratings of Daikin Altherma in transparency to the DOE Waiver but received response and the notion that the CEC could not accept ONLY COP or EER values (even though this is the only energy descriptors for WSHP systems).

Based on the specific request of the CEC staff members per your letter dated September 30, 2010 (I highlighted attached for you reference), Daikin then submitted an ECM logic to the CEC in January 2010, that included, and means to verify, values for SEER, HSPF and EF. This submission was based entirely on published Daikin data and in-keeping with the scope of the DOE Waiver, but designed to satisfy the specific requirement from CEC to reference "Separate efficiencies should be established for when the product is used only for space heating (COP, HSPF) only for space cooling (EER, SEER) only for domestic water heating (EF) and only for combined space and water heating." and to enable a method that could be repeated should other manufacturers, or representatives of other manufacturers wanted to apply for the same ECM. Incidentally, we believe the "repeatability for others" is very much achieved and transparent.

The DOE Waiver does specify that rating Daikin Altherma as a Stand Alone HPWH should be addressed by a separate waiver application but also the waiver conclusions are somewhat contradictory as they recognize in response to Carrier's comments that existing procedures (Whether for SEER/HSPF, of the DOE HPWH test standard) are not adequate or appropriate for Altherma as an Air to Water Heat Pump. As we do not

promote, encourage or enable the sales of Daikin Altherma in Stand Alone HPWH applications, we did not pursue an additional waiver from the DOE.

In terms of Daikin's application to CEC, or in how we market, promote or apply Daikin Altherma, there is no mention nor scope of Daikin Altherma being used solely as a Water Heater. The reality is if a potential customer suggested using Daikin Altherma for DHW operation ONLY, we would actually recommend NOT to do so, as its neither cost effective nor is what the product is designed for. The Integrated Water Heating function is an "option" of the primary Daikin Altherma Heat Source Outdoor Unit (plus Hydrobox) that adds the means to provide a DHW solution to the structure.

The Alternative EF proposed by Daikin for Daikin Altherma per the requirements informed by the CEC, is derived from the COP values at Nominal Conditions per the DOE Waiver, and published in extensive engineering and support materials.

If the CEC want to consider forbidding the use of Daikin Altherma as a "Stand Alone HPWH" then Daikin has no issue at all with this - as mentioned, this is not what Daikin Altherma is intended for or applied as.

I hope this helps clarify the situation and background to the ECM application made by Daikin.

Mark will be calling you momentarily to discuss this further.

Kind Regards

Lee Smith

Assistant Vice President - Residential Solutions

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-----Original Message-----

From: David Ware [<mailto:DWare@energy.ca.gov>]

Sent: Monday, January 30, 2012 1:56 PM

To: Mark Stanga

Cc: Smith, Lee

Subject: Re: Altherma Compliance Option

Mark:

One of the things we're struggling with is the water heating portion of the DOE order of June 18, 2010 (75 Fed. Reg. 117) stating that Daikin must seek a DOE waiver or test to 10 CFR part 430, subpart B, appendix E. Your email of Jan. 26th responding to further comments by Pat Splitt discusses how the Altherma system operates in multiple modes but isn't clear on how/why the system's tested COP is appropriate for the water heating EF. If DOE has said the Atherma water heater must be tested, or a waiver granted, then using the COP as the moniker of water heater performance may not be appropriate, nor something our regulations allow. We need some clarification of this issue.

We will not make the Feb. 8th business meeting. I apologize for this and understand your need for approval and have been preparing necessary internal items for it. However, we cannot go forward without clear resolution of the technical concerns recently brought forward. If possible, I'd like to resolve these concerns quickly. I will then create a new webpage listing and post the final evaluation report with efficiency ratings to circumvent any concern that might be raised regarding the need for sufficient time for public input.

Please call to discuss.

DAVE

David W Ware

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>>> Mark Stanga <mstanga@verizon.net <mailto:mstanga@verizon.net> >  
1/28/2012 9:14 PM >>>

Dave, I see from the agenda posted on the Commission's web site  
yesterday evening that the Altherma compliance option is not scheduled  
for consideration on February 8. I would like to speak with you on  
Monday about this matter. I will be traveling, but I will call you.

Mark Stanga

CC: larry.sutton@Daikinac.com